

09/600392

534 Rec'd PCT/PTC 14 JUL 2000

SEQUENCE LISTING

<110> PHARMACIA & UPJOHN COMPANY

Quinn, Cheryl L.

Ford, Charles W.

<120> AN AUTOREGULATORY SYSTEM FOR VALIDATING MICROBIAL GENES
AS POSSIBLE ANTIMICROBIAL TARGETS USING A
TETRACYCLINE-CONTROLLABLE ELEMENT

<130> 6137.P US

<140> Unassigned

<141> 2000-07-13

<150> 60/071,640

<151> 1998-01-16

<160> 45

<170> PatentIn Ver. 2.1

<210> 1

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 1

acgcacgagc tcggttcag atggcattgt c

31

<210> 2

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 2

ggggtacccc ctctgcaa at gtcaaa

26

<210> 3
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 3
acgcacgagc tcagatcttc gcttgtgcgg

30

<210> 4
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 4
ggggtacccg ctgaagagat agcgattg

28

<210> 5
<211> 33
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 5
acgcacgagc tctttcagaa atgttcggtt atg

33

<210> 6
<211> 28
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 6
ggggtaccaa atttatctct catgatag 28

<210> 7
<211> 21
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 7
caggtacagc agtaagtaag c 21

<210> 8
<211> 21
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 8
gtcaacgtga gcgtagtgac g 21

<210> 9
<211> 54
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 9
cgaagtttga tagatgatac attctattaa acttcctttt tttatgctct gaaa 54

<210> 10
<211> 50
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 10

aaacaatgat tatctacctt attagtgcag atagataacc attgtttatc 50

<210> 11

<211> 52

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 11

agcataaaaa aaggaagttt aatagaatgt atcatctatc aaacttcggt ac 52

<210> 12

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 12

ccgggataaa caatggttat ctatctgcac taataaggta gataatcatt gtttttttcag 60

<210> 13

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 13

cgggatccaa tggaggaaaa tcacatg 27

<210> 14

<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 14
tccccccggg taggacacaa tatccacttg tag 33

<210> 15
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 15
gactagtttg acaaataact ctatcaatga tagagtgtc 39

<210> 16
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 16
taatgatgtc tagattagat aaaagt 26

<210> 17
<211> 29
<212> DNA
<213> Artificial Sequence

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Oligonucleotides

<400> 17

cgggatcctt aagacccact ttcacattt

29

<210> 18

<211> 62

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 18

ctagacatca ttaattcctc ctttttggtg acactctatc attgatagag ttatttgtca 60
aa 62

<210> 19

<211> 60

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 19

ctagtttgac aaataactct atcaatgata gtgtcaacaa aaaggaggaa ttaatgatgt 60

<210> 20

<211> 46

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 20

ctagtttttt atttgctgag ttcattgaaaa actaaaaaaaa attgac 46

<210> 21

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 21

tttttttag tttttcatga actcgacaaa taaaaaa

37

<210> 22

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 22

actctatcat tgatagagta taattaaaat aaaaaagctg ca

42

<210> 23

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 23

acatacgcat gcgaattctt aaaattcctt cattacactc

40

<210> 24

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 24

gcttttttat ttttaattata ctctatcaat gatagagtgt caa

43

<210> 25

<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 25
aactgcagta atatcggagg gtttattttg

30

<210> 26
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 26
gtttaaactt aaaattcttc attacactc

29

<210> 27
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 27
ggaattttta gtttaaactg caaatcggga aatgaaatta at

42

<210> 28
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 28

acatacgcac gcgaattcaa gtattgatat ggtaaataatg g

41

<210> 29

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 29

ggaatttttaa gtttaaacga ggagtaggtt gaatgggta

39

<210> 30

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 30

acatacgcac gcgaattcct tgcgctaaaa ttatac

36

<210> 31

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 31

ggaatttttaa gtttaaacga ataggagaga ttttataatg gc

42

<210> 32

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 32

acatacgcacat gcgaattcac gagtttgtgg cattggacc

39

<210> 33

<211> 114

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA
fragment

<400> 33

ggtaccgaag tttgatagat gatacattct attaaacttc ctttttttat gctctgaaaa 60
aacaatgatt atctacctta ttagtgcaga tagataacca ttgtttatcc cggg 114

<210> 34

<211> 2076

<212> DNA

<213> Escherichia coli

<400> 34

cccgggtagg acacaatatc caettgtagt ttataataac gatctcctcc ttcccacttt 60
aattcaaate tatattaaag aatatttcat cttatttaat aagaaacacat atttatataa 120
caacataaaa cgcactaagt tattttattg aacatatatc ttactttatc tatccgacta 180
tttagacgac ggggtctggca aacagggttcg ccagtggtaa cctgatatcc ttttagctct 240
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caaccatagc gtatcccttc cataactgca ttttgaaaatg attgatttaa gtatccaaga 660
gaaaccgagc tctcatactg cattccactt cccaacggaa gcggtgatac agataaacca 720
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atattacttt ttgcacttcc atgataaaga gggaacagag aacaattctg aaatcttatg 1440
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aggtcacgtt ttccctctat taccgtatcc cattgttcag attcggtaaa gttcgtcaca 1560
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ttaatatcct gataaaccgt tgataaatca attccatfff ggtcaatctt attgataaaa 1680
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cactgaaaag aggttattcc tgtctgaatt gtaattcctc tctgacgttc taaaagcgta 1920
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tataataagc tttctgttaa ggtagttttt cctgcatcaa catgagctaa aactccaata 2040
ttaataattt tcatgtgatt ttcctccatt ggatcc 2076

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<210> 35
<211> 615
<212> DNA
<213> Escherichia coli

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<400> 35
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aaggccgaat aagaaggctg gctctgcacc ttggtgatca aataattcga tagcttgctg 120
taataatggc ggcatactat cagtagtagg tgtttccctt tcttcttttag cgacttgatg 180
ctcttgatct tccaatacgc aacctaaagt aaaatgcccc acagcgctga gtgcatataa 240
tgcattctct agaaaaacct tgttggcata aaaaggctaa ttgattttcg agagtttcat 300
actgtttttc tgtaggccgt gtacttttgc tccatcgaga tgacttagta aagcacatct 360
aaaactttta gcgttattac gtaaaaaaatc ttgccagctt tccccttcta aagggcaaaa 420
gtgagtatgg tgctatcta acatctcaat ggctaaggcg tcgagcaaag cccgcttatt 480
ttttacatgc caatacaatg taggctgctc tacacctagc ttctgggcga gtttacgggt 540
tgttaaacct tcgattccga cctcatlaag cagctctaatt gcgctgttaa tcaactttact 600
tttatctaatt ctaga 615

```

```

<210> 36
<211> 680
<212> DNA
<213> Escherichia coli

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<400> 36
ggatccttaa gaccacttt cacatttaag ttgtttttct aatccgcata tgatcaattc 60
aaggccgaat aagaaggctg gctctgcacc ttggtgatca aataattcga tagcttgctg 120
taataatggc ggcatactat cagtagtagg tgtttccctt tcttcttttag cgacttgatg 180
ctcttgatct tccaatacgc aacctaaagt aaaatgcccc acagcgctga gtgcatataa 240
tgcattctct agaaaaacct tgttggcata aaaaggctaa ttgattttcg agagtttcat 300
actgtttttc tgtaggccgt gtacttttgc tccatcgaga tgacttagta aagcacatct 360
aaaactttta gcgttattac gtaaaaaaatc ttgccagctt tccccttcta aagggcaaaa 420

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gtgagtatgg tgcctatcta acatctcaat ggctaaggcg tcgagcaaag cccgcttatt 480
ttttacatgc caatacaatg taggctgctc tacacctagc ttctgggaga gtttacgggt 540
tggttaacct tcgattccga cctcattaag cagctcctaat gcgctgttaa tcactttact 600
tttatcta atctagacatca ttaattccta atttttgttg acgacactct atcattgata 660
gagttatttg tcaaactagt                                     680

```

<210> 37

<211> 152

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Oligonucleotides

<400> 37

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tctagacatc attaattcct cctttttgtt gacactctat cattgataga gttatttgtc 60
aaactagttt tttatttgtc gagttcatga aaaactaaaa aaaattgaca ctctatcatt 120
gatagagtat aattaaaata aaaaagctgc ag                                     152

```

<210> 38

<211> 876

<212> DNA

<213> Staphylococcus aureus

<400> 38

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ctgcagcgga gggtttattt tgaaaaagtt aatattttta attgtaattg ctttagtttt 60
aagtgcattg aattcaaca gtccacatgc caaagagtta aatgatttag aaaaaaata 120
taatgctcat attgggtgtt atgctttaga tactaaaagt ggtaagggaag taaaatttaa 180
ttcagataag agatttgcct atgcttcaac ttcaaaagcg ataaatagtg ctattttgtt 240
agaacaagta ccttataata agttaataaa aaaagtacat attaacaaag atgatatagt 300
tgcttattct cctatttttag aaaaatatga ggaaaagata tcactttaaa agcacttatt 360
gaggcttcaa tgacatatag tgataatata gcaacaata aaattataaa agaaatcggg 420
ggaatcaaaa aagttaaaca acgtctaaaa gaactaggag ataaagtaac aaatccagtt 480
agatatgaga tagaattaaa ttactattca ccaaagagca aaaaagatac ttcaacacct 540
gctgctttcg gtaagacttt aaataaactt atcgcaaatg gaaaattaag caaagaaaac 600
aaaaaattct tacttgattt aatgtttaat aataaaagcg gagatacttt aattaaagac 660
ggtgttccaa aagactataa gggtgctgat aaaagtgggc aagcaataac atatgcttct 720
agaaatgatg ttgcttttgt ttatcctaag ggccaatctg aacctattgt tttagtcatt 780
tttacgaata aagacaataa aagtgataag ccaaagata agttgataag tgaaaccggc 840
aagagtgtaa tgaaggaatt ttaagaattc gcatgc                                     876

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<210> 39

<211> 872

<212> DNA

<213> Staphylococcus aureus

<400> 39

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ctgcagcgga gggtttattt tgaaaaagtt aatattttta attgtaattg ctttagtttt 60
aagtgcattg aattcaaaca gttcacatgc caaagagtta aatgatttag aaaaaaata 120
taatgctcat attgggtgtt atgcttttag tactaaaagt ggtaaggaag taaaatttaa 180
ttcagataag agatttgctt atgcttcaac ttcaaaagcg ataaatagtg ctattttgtt 240
agaacaagta ccttataata agttaaataa aaaagtacat attaacaaag atgatatagt 300
tgcttattct cctatttttag aaaaatatga ggaaaagata tcactttaaa agcacttatt 360
gaggcttcaa tgacatatag tgataatata gcaaacaata aaattataaa agaaatcggt 420
ggaatcaaaa aagttaaaca acgtctaaaa gaactaggag ataaagtaac aaatccagtt 480
agatatgaga tagaattaaa ttactattca ccaaagagca aaaaagatac ttcaacacct 540
gctgctttcg gtaagacttt aaataaactt atcgcaaatt gaaaattaag caaagaaaac 600
aaaaaattct tacttgattt aatgttaaat aataaaagcg gagatacttt aattaaagac 660
ggtgttccaa aagactataa gggtgctgat aaaagtggtc aagcaataac atatgcttct 720
agaaatgatg ttgcttttgt ttatcctaag ggccaatctg aacctattgt tttagtcatt 780
tttacgaata aagacaataa aagtgataag ccaaatgata agttgataag tgaaaccgcc 840
aagagtgtaa tgaaggaatt ttaagtttaa ac 872
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<210> 40

<211> 330

<212> DNA

<213> Staphylococcus aureus

<400> 40

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cagctctttc agaaatttcg gttatgcaac atcattacgt tcaaacactc aaggctcgcg 60
tacttacact atgtacttcg atcactatgc tgaagttcca aaatcaatcg ctgaagatat 120
tatcaagaaa aataaagggtg aataatataa cttgttttga ctagctagcc taggttaaaa 180
tacaagggtg gcttaaatgt aagctatcat ctttatagtt tgattttttg ggggtgaatgc 240
attataaaaag aattgtaaaa ttctttttgc atcgctataa ataatttctc atgatgggtga 300
gaaactatca tgagagataa atttggtacc 330
```

<210> 41

<211> 385

<212> DNA

<213> Staphylococcus aureus

<400> 41

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gtttaaacga ataggagaga ttttataatg gcaaaagaaa aattcgatcg ttctaaagaa 60
catgccaaatt cgggtacttcg gtcacgttga ccatggtaaa acaacattaa cagcaatcgc 120
tactgtatta gcaaaaaaatg gtgactcagt tgcacaatca tatgacatga ttgacaacgc 180
tccagaagaa aaagaacgtg gtatcacaat caatacttct cacattgagt accaaaactga 240
caaacgtcac tacgctcacg ttgactgcc aggacacgct gactacgtta aaaacatgat 300
cactgggtgct gctcaaatgg acggcgggtat cttagtagta tctgctgctg acgggtccaat 360
gccacaaact cgtgaattcg catgc 385
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<210> 42
 <211> 379
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 42
 gagctcgggt gcagatggca ttgtcattgg tagcgaaatc gttaagcgat ttaaactctaa 60
 cacgcgtgag gaaatcatta aatattttaca atctatccaa caaacattga ataattaagt 120
 ttacttgatt taaaaaaatt aggcgaatac tgtttgaaaa agtgaaaaac ggtgaattat 180
 aaaattgaat acaattttcaa aaaaagtaat atgagcaaac ccaaacgttc atattacttt 240
 ttttgaaatt gtattcaaaa atctaaatat tactataaaa gtatacgcaa ttaaagcggt 300
 tatgttttag ttttaacatt aactattgta tacttattta gattagattt attatttttg 360
 acatttgacg aggggtacc 379

<210> 43
 <211> 420
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 43
 gtttaaactg caaatacgga aatgaaatta attaacgaga gacaaatagg agtaatgata 60
 atgaagttaa caaatttaac agctaaagag tttggtgcct ttacagatag catgccatac 120
 agtcatttca cgcaaaactgt tggccactat gagttaaagc ttgctgaagg ttatgaaaca 180
 catttagtgga gaataaaaaa caataataac gaggtcattg cagcttgctt acttactgct 240
 gtacctgtta tgaaagtgtt caagtatttt tattcaaatc gcggtccagt gattgattat 300
 gaaaatcaag aactcgtaca ctttttcttt aatgaattat caaaatatgt taaaaaacat 360
 cgttgtctat acctacatat cgatccatat ttaccatata aatacttgaa ttgcgatgcg 420

<210> 44
 <211> 290
 <212> DNA
 <213> *Staphylococcus aureus*

<400> 44
 gagctcgggt tcaatattaa ctgaaaaaga attagattaa atattaattt ggaaaactgg 60
 aacaaccaa aagttatatg accgcgtagg tcttaatgaa gagacgctaa gtatttttaga 120
 tactgaaatc actaaaaaaa caatacctgt aagacctggg agaaatgttg cggttaattat 180
 tgaggctcgt gcaatgaact atcgattaaa tatcatgggc attaacactg ccgaagaatt 240
 tagtgaaaga ttaaatagaag aaattatcaa gaacagtcac aagaggtacc 290

<210> 45
 <211> 434
 <212> DNA
 <213> *Staphylococcus aureus*

[illegible]

15